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BRIARCLIFF MANOR, NY 10510

EXAMINER

MOORE JR, MICHAEL J

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2666

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Please find below and/or attached an Office communication concerning this application or proceeding.

## 2666

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## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 3/3/2003 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statement.

### ***Drawings***

2. The drawings are objected to because of the following informalities: In Figure 8, it is suggested that the words "Yes" and "No" be added to the arrows leading from step 120 to be more precise. Specifically, if step 120 is "Yes", then go to step 140. If step 120 is "No", then go to step 160.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended.

The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency.

Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application

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must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claims **1-5, 9, 13-15, 21, and 25** are objected to because of the following informalities:

Regarding claim **1**, on line 11, the word "a" is missing before word "point".

Regarding claim **2**, on line 4, the phrase "said control signal" should be "said control frame" to be more precise.

Regarding claim **3**, on line 5, the phrase "said control signal" should be "said control frame" to be more precise.

Regarding claim **4**, on line 5, the phrase "said control signal" should be "said control frame" to be more precise.

Regarding claim **5**, on line 10, the phrase "said control signal" should be "said control frame" to be more precise.

Regarding claim **9**, on line 14, the phrase "said predetermined time period" should be "said predetermined time interval" to be more precise. Also, on line 14, the phrase "said control signal" should be "said control frame" to be more precise.

Regarding claim **13**, on line 5, the phrase "said control signal" should be "said control frame" to be more precise.

Regarding claim **14**, on line 5, the phrase "said control signal" should be "said control frame" to be more precise.

Regarding claim **15**, on line 8, the phrase "said control signal" should be "said control frame" to be more precise.

Regarding claim **21**, there is some confusion regarding the limitation "*inhibit transmission from the plurality of first and second stations when permitting the plurality of second stations to transmit a data packet*". According to this limitation, the plurality of second stations are inhibited and permitted to transmit at the same time. It is believed that the plurality of first stations should be inhibited while the plurality of second stations are permitted to transmit.

Regarding claim **25**, there is some confusion regarding the limitation "...*the CCHC further operates to permit transmission of said plurality of first second stations to transmit a data packet having a shorter duration...*". It is unclear which stations are transmitting.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim **19** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim **19** recites the limitation "said control signal" in line 12. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims **9 and 15-17** are rejected under 35 U.S.C. 102(e) as being anticipated by Texerman et al. (U.S. 2004/0141522) ("Texerman"). Texerman teaches all of the limitations of the specified claims with the reasoning that follows.

Regarding claim **9**, "a method for sharing the bandwidth over a wireless channel between a plurality of first stations and a plurality of second stations in a wireless local area network (WLAN) having an access point (AP)" is anticipated by the method spoken of on page 6, paragraphs 63-66 performed by the system shown in Figure 4 containing M-MT stations (first stations) and E-MT stations (second stations) as well as a multimedia access point (AP).

"Transmitting a control frame having a contention free period mode and a contention period mode, the control frame including data indicative of a predetermined time interval that each of the first stations has to complete data transmission onto the wireless channel" is anticipated by the broadcasting of time slices 102 and 104 (data

indicative of a predetermined time interval) by an arbitrator entity of the access point that indicate the time intervals in which each set of mobile terminals (802.11a and HL2) may transmit as shown in Figure 1 and as spoken of on page 6, paragraph 63.

“Determining whether the wireless channel between the AP and the plurality of first and second stations is available” is anticipated by the partitioning of the periodic time domain into slices by the arbitrator entity spoken of on page 6, paragraph 63.

Lastly, “if the wireless channel is available during the CP mode, polling at the AP to inhibit transmission of the plurality of first stations over the wireless channel and permitting the plurality of second stations to transmit a data packet to the AP over the wireless channel, the data packet including a shorter duration than the predetermined time period specified in the control signal” is anticipated by the broadcasting of time slices 102 and 104 (data indicative of a predetermined time interval) by an arbitrator entity of the access point that indicate the time intervals (shorter duration portion of 2ms frame) in which each set of mobile terminals (802.11a and HL2) may or may not transmit as shown in Figure 1 and as spoken of on page 6, paragraphs 63-66.

Regarding claim 15, “transmitting, from the AP to the plurality of first and second stations, a high priority signal indicative of a duration that the plurality of first and second stations is allowed to occupy the wireless channel” is anticipated by the broadcasting of time slices 102 and 104 (data indicative of a predetermined time interval) by an arbitrator entity of the access point that indicate the time intervals (shorter duration portion of 2ms frame) in which each set of mobile terminals (802.11a and HL2) may or may not transmit as shown in Figure 1 and as spoken of on page 6, paragraphs 63-66.

Lastly, “permitting the plurality of second stations to transmit a data packet to the AP over the wireless channel, the data packet including a shorter duration than the predetermined time period specified in the control signal” is anticipated by the 802.11a time slice 102 and HL2 time slice 104 shown in Figure 2 that indicate a portion (shorter duration) of the 2ms frame that particular mobile terminals may occupy the channel.

Regarding claim **16**, “wherein the plurality of first stations includes 802.11 compliant systems” is anticipated by the 802.11a transmission shown in Figure 2.

Regarding claim **17**, “wherein the plurality of first stations can transmit data frames without permission from the AP and the plurality of second stations can transmit frames when permitted by the AP” is anticipated by the 802.11a time slice 102 and HL2 time slice 104 shown in Figure 2 that indicate a portion (shorter duration) of the 2ms frame that particular mobile terminals may occupy the channel.

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was



not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims **19-22, 26, and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Texerman et al. (U.S. 2004/0141522) ("Texerman").

Regarding claim **19**, Texerman teaches a multimedia access point (receiver) in Figure 4 containing an arbitrator (CCHC circuit) used to partition 2ms periodic frames into time slices (shorter duration) that indicate when 802.11a devices and HL2 devices can and cannot transmit as spoken of on page 6, paragraphs 63-66.

Texerman does not explicitly show processing circuitry within the multimedia access point of Figure 4 used for processing incoming and outgoing signals.

However, at the time of the invention, it would have been obvious to someone skilled in the art to use the multimedia access point of Texerman to process incoming and outgoing signals, as there must be some form of processing circuitry present to enable communication with the mobile stations.

Regarding claim **20**, Texerman further teaches a multimedia access point that broadcasts (transmits) time slices that indicate the time intervals (shorter duration portion of 2ms frame) in which each set of mobile terminals (802.11a and HL2) may or may not transmit as shown in Figure 1 and as spoken of on page 6, paragraphs 63-66.

Regarding claim **21**, Texerman further teaches the broadcasting of time slices 102 and 104 (data indicative of a predetermined time interval) by an arbitrator entity of the access point that indicate the time intervals (shorter duration portion of 2ms frame)

in which each set of mobile terminals (802.11a and HL2) may (permit) or may not (inhibit) transmit as shown in Figure 1 and as spoken of on page 6, paragraphs 63-66.

Regarding claim **22**, Texerman further teaches the broadcasting of time slices (specified range of time) 102 and 104 by an arbitrator entity of the access point that indicate the time intervals (shorter duration portion of 2ms frame) in which each set of mobile terminals (802.11a and HL2) may (permit) or may not (inhibit) transmit as shown in Figure 1 and as spoken of on page 6, paragraphs 63-66.

Regarding claim **26**, Texerman further teaches 802.11a compliant transmission (time slice 102) in Figure 2.

Regarding claim **27**, Texerman further teaches HL2 compliant transmission (time slice 104) in Figure 2.

***Allowable Subject Matter***

12. Claims **1-8** are allowable over the prior art of record.

13. Claims **10-14, 18, and 23-25** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim **1**, Texerman teaches broadcasting of time slices 102 and 104 (data indicative of a predetermined time interval) by an arbitrator entity of an access point that indicate the time intervals in which each set of mobile terminals (802.11a and HL2) may transmit as shown in Figure 1 and as spoken of on page 6, paragraph 63.

Texerman fails to teach determining whether the predetermined time interval specified in the control frame is longer than an interval following receipt of a last frame from one of the first stations and before a scheduled start of a set of next frames from at least one of the second stations. Texerman also fails to teach waiting for a point interframe spacing interval after which the next frames from the second stations are allowed to be transmitted.

Regarding claims **2-8**, these claims are further limiting to claim **1** and are thus also allowable over the prior art of record.

Regarding claim **10**, Texerman teaches the method of claim **9**. Texerman fails to teach determining whether the predetermined time interval specified in the control frame is longer than an interval following receipt of a last frame from one of the first stations and before a scheduled start of a set of next frames from at least one of the second stations.

Regarding claims **11-14 and 18**, these claims are further limiting to claim **10** and are thus also allowable over the prior art of record.

Regarding claim **23**, Texerman teaches the system of claim **22**. Texerman fails to teach where the range is determined according to the presently claimed equation.

Regarding claim **24**, Texerman teaches the system of claim **19**. Texerman fails to teach where the CCHC transmits a data packet to the plurality of first and second stations if the predetermined time interval is less than the time left before a scheduled start of a next frame by the plurality of second stations.

Regarding claim **25**, Texerman teaches the system of claim **19**. Texerman fails to teach where the CCHC permits the plurality of first stations to transmit a data packet having a shorter duration than the predetermined time interval if the predetermined time interval is less than the time left before a scheduled start of a next frame by the plurality of second stations.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sherman (U.S. 2003/0161279), Choi (U.S. 6,795,418), Mangold et al. (U.S. 2004/0022219), Crosbie et al. (U.S. 2002/0114303), Yonge, III et al. (U.S. 6,907,044), Benveniste (U.S. 2002/0163933), and Takabatake (U.S. 6,728,244) are other references pertinent to this application.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Moore, Jr. whose telephone number is (571) 272-3168. The examiner can normally be reached on Monday-Friday (8:30am - 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached at (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael J. Moore, Jr.  
Examiner  
Art Unit 2666

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PRIMARY EXAMINER